

LPDES PERMIT NO. LA0043532, AI NO. 1986, ACTIVITY NO. PER20080001

**LPDES STATEMENT OF BASIS
FOR THE DRAFT LOUISIANA POLLUTANT DISCHARGE ELIMINATION SYSTEM
(LPDES) PERMIT TO DISCHARGE TO WATERS OF LOUISIANA**

COMPANY/FACILITY: Cargill Inc.
Cargill Salt – Breaux Bridge
1224-A Salt Mine Road
Breaux Bridge, Louisiana

ISSUING OFFICE: Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services
Post Office Box 4313
Baton Rouge, Louisiana 70821-4313

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DATE PREPARED: August 3, 2009

I. PERMIT STATUS

A. Reason For Permit Action:

Proposed reissuance of a Louisiana Pollutant Discharge Elimination System (LPDES) permit for a 5-year term following regulations promulgated at LAC 33:IX.2711/40 CFR 122.46.

LAC 33:IX Citations: Unless otherwise stated, citations to LAC 33:IX refer to promulgated regulations listed at Louisiana Administrative Code, Title 33, Part IX.

40 CFR Citations: Unless otherwise stated, citations to 40 CFR refer to promulgated regulations listed at Title 40, Code of Federal Regulations in accordance with the dates specified at LAC 33:IX.2301, 4901 and 4903.

B. LPDES permit LA0043532
Effective date: February 1, 2004
Expiration date: January 31, 2009

C. LPDES permit LAR05M285
Effective date: May 23, 2006
Expiration date: April 30, 2011

D. Application was received on July 28, 2008

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II. FACILITY INFORMATION

A. Location:

1224-A Salt Mine Road, St. Martin Parish
Latitude: 30° 15' 44", Longitude: 91° 56' 50"

B. Applicant Activity:

Cargill Salt – Breaux Bridge is an existing facility which produces salt by solution mixing, evaporation and crystallization. Production volume is approximately 600 tons per day. Wastewater is discharged via local drainage into the Vermilion River. Wastewater discharges include condensate wastewater and treated sanitary wastewater. According to the NPDES Fact Sheet dated December 4, 1986, this facility has achieved virtually no discharge of process pollutants. Prior to 1974, non-contact cooling tower water was discharged through an individual outfall. A closed loop cooling tower for recirculation of cooling water to condensers was installed thus eliminating this wastewater. Stormwater not collected and recycled through the process is regulated by Multi-Sector General Permit LAR05M285. The manufacturing process, generation and discharge of wastewaters, and production volume were confirmed during a phone conversation with a representative of the facility on August 6, 2009.

C. Technology Basis:

40 CFR Chapter I, Subchapter N, Effluent Guidelines and Standards, Parts 401, 405-417 and 421-471 as adopted by reference in LAC 33:IX.4903.

Guideline

Inorganic Chemicals Manufacturing Point Source Category

Reference

Subpart F

40 CFR 415.162

According to the December 4, 1986, NPDES Fact Sheet for this facility, the NPDES permit effective November 12, 1978, established limitations based on BPJ in accordance with guidelines at 40 CFR Part 415.162 – Sodium Chloride Production Subcategory.

Other sources of technology based limits:

Current Permit (Effective February 1, 2004)

LDEQ Stormwater Guidance, letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (USEPA)

Louisiana Water Quality Management Plan for Sanitary Dischargers

Best Professional Judgment (BPJ)

General Permit LAG480000

General Permit LAG530000

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D. Fee Rate:

1. Fee Rating Facility Type: Minor
2. Complexity Type: III
3. Wastewater Type: III
4. SIC codes: 2899

E. Continuous Facility Effluent Flow:

0.109 Million gallons per day (MGD)

III. RECEIVING WATERS:

A. Stream:

Local drainage to the Vermilion River

B. Basin and Subsegment:

Vermilion-Teche River Basin, Subsegment 060801

C. Designated Uses:

The designated uses of this subsegment in the Vermilion-Teche River Basin are primary contact recreation, secondary contact recreation, propagation of fish and wildlife and agriculture.

IV. OUTFALL INFORMATION:

Outfall 001:

A. Discharge Type:

The discharge of condensate wastewater

B. Location:

At the point of discharge from the pond prior to mixing with other waters of the state at Latitude 30° 15' 40", Longitude 91° 56' 56".

C. Treatment:

None

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D. Flow:

Continuous at 0.108 MGD

Internal Outfall 002

A. Discharge Type:

The discharge of treated sanitary wastewater

B. Location:

At the point of discharge from the extended aeration sewage plant at
Latitude 30° 15' 38", Longitude 91° 56' 55"

C. Treatment:

Extended aeration

D. Flow:

Continuous at 1000 GPD

V. PROPOSED CHANGES FROM PREVIOUS PERMIT:

- A. The description of Outfall 001 is updated to better reflect the discharge of this outfall by removing from the description cooling tower blowdown. A permit application dated August 31, 1974, defined a change in which the non-contact cooling water would be converted to a closed loop system. This information was confirmed with a representative of the facility on August 6, 2009.
- B. Visible sheen is added to the requirements for Outfall 001, condensate wastewater. Visible sheen limitations and monitoring requirements are established as BPJ and are based on the Light Commercial General Permit LAG480000, Schedule H. Visible observation shall be made once per month and the presence or absence of sheen shall be recorded. The number of exceedances and the total number of observation shall be reported quarterly.

VI. PERMIT LIMIT RATIONALE:

The following section sets forth the principal facts and the significant factual, legal, methodological and policy questions considered in preparing the draft permit. Also, set forth are any calculations or other explanations of the derivation of specific effluent limitation and conditions, including a citation to the applicable effluent limitation guideline or performance standard provisions as required under LAC 33:IX.2707 and reasons why they are applicable or an explanation of how the alternate effluent limitations were developed.

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A. Outfall 001:

The continuous discharge of condensate wastewater

PARAMETER	MONTHLY AVERAGE	DAILY MAXIMUM	MONITORING FREQUENCY
Flow-MGD	---	Report	Continuous
Chloride	---	230 mg/L	1/month
Temperature ¹	---	90° F	1/month
TSS	82 lb/day	163 lb/day	1/month
Visible Sheen	---	No Presence	1/month
pH(standard units)	6.0	9.0	1/month

¹ The temperature at the edge of the mixing zone shall not exceed 90° F. This condition does not apply to privately owned reservoirs or to reservoirs constructed solely for industrial cooling purposes.

Site Specific Considerations for Outfall 001

Flow is established in accordance with LAC 33:IX.2707.I.1.b. Flow shall be monitored continuously. This requirement has been retained from the current LPDES permit, effective on February 1, 2004.

Chloride is established based on the numerical criterion for Subsegment 060801 as defined by LAC 33:IX.1121. Chloride shall be monitored at a frequency of once per month and collected as a grab sample. These requirements have been retained from the current LPDES permit effective on February 1, 2004.

Temperature monitoring is established as BPJ and was originally included in NPDES Permit No. LA0043535, effective November 12, 1978. This requirement will be retained and is consistent with the previous permits.

TSS limitation and monitoring requirements are established as BPJ in accordance guidelines at 40 CFR Part 415.162 – Sodium Chloride Production Subcategory. These requirements were established in NPDES Permit No. LA0043532, effective November 12, 1978. These requirements will be retained and are consistent with the previous permits.

Visible sheen monitoring requirements are established as BPJ and are based on the Light Commercial General Permit LAG480000, Schedule H. Visible observation shall be made once per month and the presence or absence of sheen shall be recorded. The number of exceedances and the total number of observations shall be reported monthly.

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pH is established in accordance with LAC 33:IX.1113.C.1. pH shall be monitored at a frequency of once per month and collected as a grab sample. This requirement have been retained from the current LPDES permit, effective on February 1, 2004.

B. Outfall 002:

The continuous discharge of treated sanitary wastewater

PARAMETER	MONTHLY AVERAGE	DAILY MAXIMUM	MONITORING FREQUENCY
Flow-MGD	---	Report	1/quarter
BOD ₅	---	45 mg/L	1/quarter
TSS	---	45 mg/L	1/quarter
Fecal Coliform ²	---	400 colonies/100 ml	1/quarter
pH	6	9	1/quarter

Future water quality studies may indicate potential toxicity from the presence of residual chlorine in the treatment facility's effluent. Therefore, the applicant is hereby advised that a future Total Residual Chlorine limitation may be required if chlorine is used as a method of disinfection. In many cases, this becomes a **NO MEASURABLE** Total Residual Chlorine limitation. If such a limitation were imposed, the applicant would be required to provide for the dechlorination of the effluent prior to discharge.

Site-Specific Considerations for Outfall 002

Flow is established in accordance with LAC 33:IX.2707.I.1.b. Flow shall be monitored at a frequency of once per quarter and reported on the DMR as an estimate. This requirement has been retained from the current LPDES permit, effective on February 1, 2004.

BOD₅ limitation and monitoring requirements are established as BPJ and are based on the LPDES Class I General Permit LAG530000. BOD₅ shall be monitored at a frequency of once per quarter and collected as a grab sample. These requirements have been retained from the current LPDES permit, effective on February 1, 2004.

TSS limitation and monitoring requirements are established as BPJ and are based on Class I General Permit LAG530000. TSS shall be monitored at a frequency of once per quarter and collected as a grab sample. These requirements have been retained from the current LPDES permit, effective on February 1, 2004.

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Fecal coliform limitation and monitoring requirements are established in accordance with LPDES Class I General Permit LAG530000. Fecal coliform shall be monitored at a frequency of once per quarter and collected as a grab sample. These requirements have been retained from the current LPDES permit, effective on February 1, 2004.

pH is established in accordance with LAC 33:IX.1113.C.1. pH shall be monitored at a frequency of once per quarter and collected as a grab sample. This requirement has been retained from the current LPDES permit, effective on February 1, 2004.

VII. TMDL WATERBODIES:

Subsegment 060801 is not listed on the 2006 Final Integrated 303(d) as impaired. However, subsegment 060801 was previously listed as impaired for phosphorus, nitrogen (nitrate and nitrite as N), organic enrichment/low dissolved oxygen (DO), pathogen indicators, suspended solids/turbidity/siltation and carbofuran. The causes of impairment other than minor industrial point sources were eliminated in the formulation of limits and other requirements of this permit (see Mermentau and Vermilion-Teche River Basin TMDLs for Carbofuran/Federal Register Notice: Volume 66, Number 178, pages 47673 – 47674, 9/31/2001).

Necessary Total Maximum Daily Loads (TMDL) were completed in December 1999.

As per the February 29, 2000 Delist (see Federal Register Notice: Volume 65, Number 173, pages 54032-54034, 9/6/2000), assessment of new data and information shows this segment is meeting water quality standards for phosphorus, cadmium and lead. In addition, subsegment 060801 has been delisted for salinity/TDS/chlorides and turbidity (see Federal Register Notice: Volume 66, Number 66, FRL-6957-5, 4/5/2001). A TMDL has been completed for DO, nitrogen, fecal coliform and sulfates (see Federal Register Notice: Volume 66, Number 66, FRL-6957-5, 4/5/2001). This TMDL did not provide for more stringent limits than those already in place for this facility.

Suspected causes of concern remaining after the elimination of non-point sources and the delisting of impairments are addressed in a manner consistent with the Department's permitting guidance for implementing Louisiana's water quality standards and applicable completed TMDLs.

The State of Louisiana has established acceptable numeric turbidity guidelines for many of its streams including the Vermillion-Teche River Basin. The State has not established a numerical criterion for TSS. Turbidity listings on the court-ordered list almost always originated from the states 305(b) or 303(d) lists while siltation and TSS listed waters originated largely from the state's nonpoint source list.

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Numerous waters are included on the Louisiana court-ordered 303(d) list as impacted due to siltation. As with TSS, there are no numeric guidelines or criteria for siltation and there is little or no existing information available that would allow a direct evaluation of stream substrate conditions. Louisiana's water quality standards provide a link between suspended solids and bottom deposits, stating that floating, settleable and suspended solids shall not be present in quantities sufficient to cause long-term bottom deposits. For siltation, a water column measure, or indicator, may be used as a quantitative expression of water quality impacts. A water column characteristic that has been widely used as an indicator of the potential for sediment accumulation in streambeds is suspended sediment (EPA, 1999). Siltation may be described as the effect created as suspended matter from the water column settles to the stream bottom. Water column data for TSS is available from the Louisiana water-quality monitoring network. In this TMDL, TSS is used as an indicator for siltation or bottom deposits resulting from inorganic sediment loads.

The discharges from this facility have the potential to discharge pollutants which may contribute to organic enrichment/DO, pathogen indicators and suspended solids of the receiving waterbody. These impairments are addressed in the effluent limitations and monitoring requirements for Outfalls 001 and 002.

Because point sources were determined as insignificant contributors of suspended solids, it was determined that discharges from point sources are already addressed through the limitations established as BPJ to maintain water quality standards. The TSS limits will remain as in the previous LPDES permit for the Outfalls 001 and 002.

Limitations consistent with those established in general permits have historically been considered protective of waters of the state. The discharge from Outfall 002 may contribute to suspended solids, organic enrichment/ DO and pathogen indicators impairments in the receiving stream. The TSS, BOD₅ and fecal coliform limits will remain as in the previous LPDES permit for Outfall 002.

The Department of Environmental Quality reserves the right to impose more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving water bodies based upon additional TMDLs and/or water quality studies. The DEQ also reserves the right to modify or revoke and reissue this permit based upon any changes to established TMDLs for this discharge, or to accommodate for pollutant trading provisions in approved TMDL watersheds as necessary to achieve compliance with water quality standards.

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VIII. COMPLIANCE HISTORY/DMR REVIEW:

- A. A file review was conducted of DMRs submitted from January 1, 2007 through July 20, 2009. The following excursions were noted:

Outfall	DMR Date	Permit Limitations	Violation
002: Stormwater	01/01/2007 - 03/31/2007	TSS 45 mg/L	TSS: 65mg/L
001: Condensate Wastewater	04/01/2007 - 06/30/2007	Chloride <230 lbs.	Chlorides 261 lbs.

- B. The most recent inspection was conducted on April 23, 2008. The inspection indicated no areas of concern.

- C. There are no open enforcement orders for any media on file.

IX. ENDANGERED SPECIES

The receiving waterbody, Subsegment 060801 of the Vermilion-Teche River Basin is not listed in Section II.2 of the Implementation Strategy as requiring consultation with the U.S. Fish and Wildlife Service (FWS). This strategy was submitted with a letter dated November 18, 2008, from Rieck (FWS) to Nolan (LDEQ). Therefore, in accordance with the Memorandum of Understanding between the LDEQ and the FWS, no further informal (Section 7, Endangered Species Act) consultation is required. It was determined that the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat.

X. HISTORIC SITES

The discharge is from an existing facility location, which does not include an expansion on undisturbed soils. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the "Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits" no consultation with the Louisiana State Historic Preservation Officer is required.

XI. TENTATIVE DETERMINATION

Based on preliminary staff review, the Department of Environmental Quality has made a tentative determination to permit for the discharge described in the application.

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XII. PUBLIC NOTICES

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the statement of basis. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

Public notice published in:

Local newspaper of general circulation

Office of Environmental Services Public Notice Mailing list